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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,609	01/16/2001	Andy L. Lee	174/188	5825

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FISH & NEAVE
1251 AVENUE OF THE AMERICAS
50TH FLOOR
NEW YORK, NY 10020-1105

EXAMINER

KIM, HONG CHONG

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 03/01/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,609

Applicant(s)

LEE ET AL.

Examiner

Hong C Kim

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 19-28 is/are allowed.
6) ☒ Claim(s) 1-5, 15-18 and 29-32 is/are rejected.
7) ☒ Claim(s) 6-14 and 33-35 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. Claims 1-35 are presented for examination. This office action is in response to the amendment filed on 1/22/04.

Specification

2. The U.S. applications referred to by Attorney Docket Numbers in pages 6 and 12 should be changed to the U.S. patent application serial numbers as appropriate. Also, the status of the referenced U.S. applications must be updated accordingly (e.g., U.S. Patent Application Serial No. ###/###,### filed Sept. 07, 1990, now abandoned; ..., now U.S. Patent #,###,### issued Jan. 01, 1994; or This application is a continuation of Serial Number ###/###,###, filed on December 01, 1990, now abandoned; ...etc.) in the Related Applications section and in any other corresponding area in the specification, if any.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 15-18, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seltzer et al. (Seltzer) U.S. Patent 4,833,651 in view of Williams et al. (Williams) U.S. Patent 5,084,841.

As to claim 1 , Seltzer discloses FIFO circuitry comprises first (Fig. 1 Ref. 14) and second counter (Fig. 1 Ref. 16) circuitries respectively counting write and read clock signals (Fig. 1 WC and RC), subtractor circuitry (Fig. 1 Ref. 18); and shift register circuitry (Fig. 1 Ref. 12) shifting in write data words in synchronism with the write clock (Fig. 1 Ref. 20) and outputting one of those data words (Fig. 1 Ref. 8). However, Seltzer does not specifically disclose gray code counters.

Seltzer discloses gray code counters (Fig. 2 Refs. 25 and 22) for the purpose of eliminating any decoding glitch (col.2 lines 60-63).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace binary system with gray code system as taught by Williams into the system of Seltzer for the advantages stated above.

As to claims 2-4, Williams further discloses detector circuitry, empty condition, and full condition (Fig. 2 Refs. 41-43).

As to claim 15, claim 15 is a rephrasing of claim 1 in a program logic device apparatus. The claim is rejected for the same reason as set forth above. Also Williams further discloses a program logic device (Fig. 1A Ref. 12).

As to claim 16, Williams discloses the invention as claimed in the claim 1. Williams further discloses a data processing system (Fig. 1A, Refs 11 and 15).

As to claims 17 and 18, Williams discloses the invention as claimed in the claim 16. Williams further discloses a printed circuit board (Fig. 1A Ref. 12, FIFO reads on this limitation).

As to claim 29, Seltzer and Williams disclose the invention as claimed. Williams further discloses gray code subtractor circuitry (Fig. 2, comparator and Ref. 4xs') comprises shift register circuitry receiving and shifting in a first data signal (Fig. 1A , data write side) and decoder circuitry receiving a second data signal (Fig. 1A, data read side).

As to claims 30-31, Seltzer further discloses first and second circuitries configured to produce data (Fig. 1, write and read circuitries).

As to claim 32, Williams further discloses a first and second clocks (Fig. 2, Write clock and Read clock).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Seltzer et al. (Seltzer) U.S. Patent 4,833,651 in view of Williams et al. (Williams) U.S. Patent 5,084,841 further in view of Computer System Architecture Prentice Hall, Inc., 1976, M. Morris Mano pp 97-98.

As to claim 5, Seltzer and Williams disclose the invention as claimed in the above. However, neither Seltzer nor Williams specifically discloses first counter circuitry counts at twice the write clock rate.

Mano discloses first counter circuitry counts at twice the write clock rate (least significant digit for the binary code in table 3-5, which alternates every two cycle reads on this limitation, see page 6 lines 28- page 7 in the applicant specification) for the purpose of generating glitch free gray code.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include first counter circuitry counts at twice the write clock rate as taught by Mano into the combined invention of Seltzer and Williams for the advantages stated above.

Allowable Subject Matter

1. Claims 6-12 and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-28 are allowed.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

3. a shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

4. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

5. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hong Kim whose telephone number is (703) 305-3835. The Examiner can normally be reached on the weekdays from 8:30 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matt Kim, can be reached on (703) 305-3821.


Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to TC-2100:
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

HK 
Primary Patent Examiner
February 29, 2004